DOCUMENT RESUME

ED 046 362 24 HE 001 959

TITLE	The Feasibility of Computer Assisted College Selection as a Guidance Counselling Aid.
INSTITUTION	Creative Concepts, Inc., Bethesda, Md.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO	BR-0-C-008
PUB DATE	Jun 70
CONTRACT	OEC-3-70-0008 (010)
NOTE	38p.
EDRS PRICE	EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS	*College Bound Students, *College Choice, *Computer Oriented Programs, Counselors, *Higher Education, Student Interests

ABSTRACT

This study analyzed and determined the feasibility of a computerized college selection service for high school students. One thousand seniors were randomly selected from among the public school system in Region III. They completed a questionnaire detailing their qualification for college admission and preference for college characteristics. This information was matched with a computerized college data bank and 10 schools most closely approximating the student's interest and abilities were identified. In addition, each cooperating counselor completed a questionnaire that presented information on the counselor's "level of satisfaction" with each student's college selections as determined by the computer. The study also developed comparative statistics about the preferences and trends of the sample. The appendices include: the guidelines for student selection, the counselor questionnaire, the C.A.M.P.U.S. questionnaire, a sample answer sheet, a list of computerized college selections, and an explanation of the computer print-out. (AF)

ER 0C068 PH 24

THE FEASIBILITY OF COMPUTER ASSISTED COLLEGE SELECTION AS A GUIDANCE COUNSELLING AID

This study has been supported by the

U.S. OFFICE OF EDUCATION, REGION III
under Contract OEC-3-70-0008 (010)
June, 1970

Prepared by:

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Acknowledgement

The success of this project is due, in large measure, to the assistance and cooperation of the guidance counselors who willingly conducted the "grass roots" phases of the project in the various high schools. The cooperation of the students was, of course, essential to the study; hopefully, they have benefited, too. Lastly, the guidance of John Morrow, Project Officer, and Frederick Will, Contract Officer is gratefully acknowledged.

SUMMARY

Conclusions

1. The interest in the project on the part of participating counselors and students was extremely high.

2. The ability of the computer to effectively and efficiently handle the data retrieval chores associated with college-selection has been proven. It would be virtually impossible for a counselor or student to make an objective appraisal of the information contained in the C.A.M.P.U.S. databank in any reasonable amount of time.

3. The C.A.M.P.U.S. computerized college-selection program matches a student's questionnaire responses to over 1/2 million facts about 2500 institutions of higher learning in the United States, and selects the ten "most appropriate" schools; the entire process takes less than 10 seconds.

4. The guidance counselors felt that in 70% of the cases, at least 5 (i.e., 1/2) of the student's college-selections were "in line" with the kinds of schools the counselor would recommend.

- in 54% of the cases at least 7 (i.e., 3/4) of the college-selections were "in line"
- in 19% of the cases all of the college-selections were "in line"

5. The computer is, indeed, a valuable data retrieval tool for the guidance counselor. It frees the counselor from the "clerical drudgery" associated with college-selection, and provides more time for in-depth counseling.

Recommendations

1. This study has demonstrated the feasibility of using the computer as a guidance support system. The cost for the operation of a computerized college-selection program, such as C.A.M.P.U.S., is so low that virtually any school system can afford to use it.

2. The U.S. Office of Education should increase its support in the area of information retrieval systems for guidance counseling. It is important, however, that emphasis be placed on improving existing systems, rather than funding fundamental research.

3. Consideration should be given to adapting the computerized college-selection system for "real-time" computer access. This system would permit counselors and students to use the data-bank on demand, thereby providing for a dynamic system.

4. Because of the proven benefits of the computer in information retrieval for college-selection, similar complementary systems should also be developed. Possible systems might include a vocational-school information system and a financial aid information system.

CONTENTS

THE PROBLEM AND THE NEED

The growing importance of higher education and the ever increasing competition for college admission has placed greater emphasis on the guidance counselor's position. The problem of maximizing the already limited counseling hours available to high school students is, indeed, becoming more critical.

In June of 1965, 2 1/2 million students graduated from high schools in the United States; of this number, approximately 52% (1.3 million) enrolled in U.S. colleges the following September. The main sources of college selection information for these students were their high school guidance counselors. Unfortunately, there were only 33,600 guidance counselors avail-

able to assist the 1,300,000, prospective college students: a ratio of 1 counselor for every 300 students. While this ratio, in itself, illustrates the lack of a sufficient number of trained guidance personnel, it tells only part of the problem.

The guidance counselor's functions are not restricted to helping a limited number of high school students select a college. In fact, the number of high school students who were numbered among the counselors' clientele in 1965 totaled almost 8 million (this does not include 3.2 million 9th grade students). The initial ratio of 1:300 now takes on a six-fold increase to the unbelievable ratio of 1:1800;[1] these counselor/student ratios are hardly suited to personal counseling.

This situation is bound to get worse. The rapid growth of two-year community colleges will undoubtedly contribute to the already difficult burden of assisting high school students with their career plans.

Because a great deal of the guidance counselor's time is devoted to helping prospective college students select a college, and since this is a time-consuming and laborious task (not to mention non-comprehensive and inaccurate, when done in the

[1]All Statistics are U.S. Office of Education estimates, and were included in the Digest of Educational Statistics, 1968 edition, Office of Education, DHEW.

traditional catalog-searching manner), every effort should be made to develop more efficient techniques; the student will be the ultimate beneficiary. This point was very soundly supported in an article which appeared in the Journal of the American Personnel and Guidance Association (APGA), Frank J. Minor, et al, said ... "The counselor should be able to devote more of his time to professional counseling activities and less time to maintaining and operating a general educational-occupational information library."[2]

There exists today an hypothesis called "the goodness of fit" hypothesis. This tenet concerns the student's satisfaction with a college. "The basic assumption of this hypothesis," says Professor Leonard Rand, "is that a choice of college will be more positive and thus a student will be more satisfied if he chooses a school with a student population similar to him in personality, interest, aptitudes, etc."[3] It would appear, then, that any assistance in bringing together students and colleges along such compatible lines will increase the probability of obtaining a more "positive" reaction from the student. Rand also states: "Satisfaction with college choice thus becomes an important

[2] Minor, Frank J., Myers, Roger A., and Super, Donald E., "An Experimental Computer-Based Educational and Career Exploration System," The Personnel & Guidance Journal, February 1969, volume 47, number 6, page 568.

[3] Rand, Leonard P., "Effect on College Choice Satisfaction of Matching Students and Colleges," The Personnel & Guidance Journal, Sept., 1968, Vol. 47, no. 1, page 35.

variable because of the implicit relationship between it and such factors as remaining at a particular college, achieving success in college, and adjusting both in the scholastic and social spheres."[4]

Prospective college students are faced with the dilemma of analyzing a great number of facts about many colleges with the intention of synthesizing these facts for sound decision-making. This process normally involves the manual task of searching college catalogs, various college selection manuals, brochures, and so on. It is virtually impossible to search through these data sources, and make an accurate analysis and decision based on their contents. Consequently, the student is left with only a "best estimate" basis for college selection.

Consider the problem of a high school student planning to attend college: first, he must decide which schools will admit him on the basis of his academic achievements; second, he must detail the kinds of characteristics (location, size, cost, degree majors, etc.) which are of interest to him; third, he must apply to the colleges he has chosen and include an application fee ranging from $10.00 to $25.00. If the student is an "average" student, he will probably apply to about five (5) schools. There is no guarantee, however, that he will be accepted at

4 Ibid

any of these schools: in fact, a student who has not evaluated each college objectively (that is devoid of personal influences) will probably be risking his opportunity to attend the college which is "best" for him. Consequently, the dollars invested in a four-year college education ($7,000 to $15,000) are jeopardized.

Throughout the entire college selection process the student is constantly besieged with subjective opinions about where to attend from family, teachers, guedance counselors, friends, and, in fact, colleges themselves. In his mad rush to gain acceptance to the selective "name" colleges, the student and his parents, too, lose sight of the real objective: choosing colleges where he can be happy and successful, where he can find courses in which he is interested, colleges he can afford. The student is desparately in need of some objective criteria on which to base his choice. Computerized college selection can provide him with such a factual and unbiased viewpoint. Here, too, authors Minor, Myers, and Super concur:

> "A major objective of the student guidance counseling centers in high schools, junior colleges, and universities is to provide individualized aid to each student to help him reduce the uncertainty of his educational and vocational plans. Frequently, this objective is not fully satisfied because of the information handling problems. Two such problems are: (a) the fallibility of both counselor and student in memorizing, associating, and selectively recalling educational and vocational facts; and (b) the inability of the counselor and the student to devote sufficient time, patience, and energy to performing the enormous number of clerical steps involved in relating educational and occupational facts to pertinent information

> about the student. Computer-based information systems may be able to reduce these deficiencies considerably. Such systems may aid both the student and the counselor.[5]

The purpose of this study has been to investigate and demonstrate the use of computerized college selection as an <u>adjunct</u> to personal guidance counseling. It must be understood that this concept is <u>not</u> intended to supplant the judgement of trained, experienced guidance counselors; rather, it is designed to alleviate some of the clerical drudgery associated with the college selection process, while improving upon the retrieval of random information.

[5] Minor, et al, <u>op cit</u>, p. 564

PROJECT DESCRIPTION -

Rationale

Much research has been supported by the U.S. Office of Education in developing various computer information systems. For the most part, however, the application of these systems has been limited to small test groups of students during the developmental stages of the project. The overall effectiveness of computer-assisted guidance systems has never been the direct object of OE-supported research.

This project has changed this practice. The actual development stages of the computer-assisted college selection system were carried out by Creative Concepts on a proprietary basis. No government support was provided for any of the design or development stages for the C.A.M.P.U.S. system. The actual databank creation, system design, questionnaire testing, and verification was conducted prior to proposing this project to the U.S. Office of Education. As a result, it was possible to propose to USOE a complete "package" system which could be administered to a student population free from any development problems. In this way, counselors and students could "test" a typical computerized college-selection system for its usefulness.

there are several computerized college-selection services available to students on a commercial basis. None of the services are significant in the field and, consequently, counselors are reluctant to recommend them to college-bound students. However, many members of the counselling profession recognize the value of the computer for information retrieval in counselling, and have indicated an interest in learning more about its application as a guidance support system. Unfortunately, they have not been able to do so without incurring unnecessary expense. This project has afforded a group of counselors and students the opportunity to witness the benefits of the computer in assisting with the college selection process. It has also permitted a comparison of the opinions of these groups, thereby adding to the objectivity of this study.

Selection of the Student Participants

The original study design called for the use of "college-bound" students in the senior year (12th grade) of high school as the student universe. However, the participation of this group was based on the assumption that the project would commence early in the academic year (i.e., prior to November: the time when most seniors are actively engaged in college selection). Because the starting date of the project was postponed until the second half of the school year, it was decided that a change in the academic level of the universe might be appropriate.

The change was made, and the universe was composed of students in the second half of the Junior year (11th grade) of high school.

The change was beneficial in that it provided a student population whose perceptions of the available college characteristics were not yet well conceived. Consequently, the students' indications of interest were precipitated by the structured nature of the questionnaire.

Each cooperating counselor was requested to follow the "Guidelines for Student Selection" (see Appendix). These criteria were intended to provide a fair degree of randomness in student selection, while assuring the inclusion of specific student characteristics. Adherence to these criteria was essential to ensure unbiased results.

The college-selection questionnaires were (generally) completed by the students during classroom time. This was done to ensure a complete understanding of the contents of the questionnaire; as well as to increase the proportion of "returned" questionnaires. Consequently, an extremely high percentage (97%) of all student participants submitted completed Answer Sheets.

Selecting the School Systems

Public school systems from within the States comprising Region III (Kentucky, Maryland, North Carolina, Virginia, and West Virginia) provided the universe for this study.

Prior to selecting the school systems for participation, assistance in determining the "composition" of each State was sought from the various State Departments of Education. This procedure ensured the presence of schools with relatively similar student populations from each State.

The school systems which participated in the study were:

STATE	SCHOOL SYSTEM	# of high schools	Quests. sent	Quests. processed
Kentucky	Fayette County	4	100	99
	Jefferson County	4	100	100
Maryland	Montgomery County	2	90	75
	Washington County	2	50	49
North Carolina	Greensboro City	2	100	99
Virginia	Albemarle County	1	50	50
	Arlington County	2	60	61
	Fairfax County	1	60	60
	Virginia Beach City	2	40	40
West Virginia	Cabell County	4	100	96
	Kanawha County	1	100	100
5 States	11 School Systems	25	850	829

In each of the school systems selected the Director of Guidance or Superintendent of Schools was visited or telephoned. The project objectives were presented and discussed, and the extent of participation was advised. Here, too, assistance was requested in selecting representative high schools from each school system. Once the participating high schools had been selected, the college-selection questionnaires were delivered (or mailed) to the cooperating guidance counselors who distributed them to the participating students. Included with each quantity of questionnaires was:

1. an Abstract of the research study
2. Guidelines for Student Selection
3. a sample of the proposed "counselor" questionnaire
4. return envelopes for use in forwarding the completed questionnaires

(see Appendix for copies of nos.1, 2,& 3.)

The College-Selection System

1. The Questionnaire

The college-selection (C.A.M.P.U.S.) questionnaire (see Appendix) provides the medium for college selection. It structures and presents the student's responses in a format which is compatible with the C.A.M.P.U.S. databank. The questionnaire has been carefully designed and tested for both its clarity and the accuracy of the responses which it elicits. These tests have been conducted with several "control groups" of high school students. The length and number of questions on the questionniare are also of critical importance. A questionnaire which is too short will not permit accurate matching of students and schools, while a questionnaire which is too long will be burdensome to complete and will result in more completion errors. We have found that the C.A.M.P.U.S. questionnaire represents the optimum amount of detail concurrent with maximum response. The questions included in the questionnaire have been carefully selected to encompass those factors which high school students feel are most important in the selection of a college.

The questionnaire consists of two different types of questions: qualification questions and preference questions. The qualification questions pertain to the student's academic achievements in high school and allow the C.A.M.P.U.S. program to determine

the colleges for which the individual might qualify. The preference questions concern the general characteristics (location, size, cost, degrees, etc.) which are most important in the student's choice of a college. In combination, these questions provide the criteria needed to select the most appropriate colleges for any given student. All questionnaire responses are recorded on a separate (detachable) Answer Sheet, thereby permitting the student to retain the questionnaire as a record of his responses.

The college-selection questionnaires were completed by the students and returned to their counselors. The Answer Sheets were then forwarded by the counselors to Creative Concepts where they were checked for completeness, identifying codes entered, and prepared (keypunched) for data input. Each student's questionnaire responses were converted into two data input cards. A total of 1658 data input cards were prepared for processing. They were keypunched, verified, and sorted according to high school for subsequent computer processing.

It is important to note that less than .7% of all Answer Sheets received were incorrectly completed. This is due to the extensive testing conducted by CCI prior to the distribution of the questionnaires to the student participants. The simplicity of the questionnaire and the clarity of the accompanying instructions have been praised by both counselors and students.

2. The College-Selection Program

The college-selection program has been designed to evaluate colleges in the same manner that a student should use in making his own decision; it considers the college as a whole rather than superficially considering only one or two factors for each institution. Unlike the student though, the C.A.M.P.U.S. system is able to make this careful and all encompassing decision rapidly and objectively for a far greater number of schools than could be analyzed manually.

While details of the decision process are proprietary, the following description will outline the basic program logic: each school is first reviewed to determine whether or not the student would meet the school's admission requirements. If the school would admit the student, a score is begun for that school. This initial score is dependent upon how closely the student meets the schools requirements. An additional score for each school is computed for each preference question. These partial scores depend on both the importance of the question to the student and the actual school characteristics. After all the preference questions have been reviewed, the score is totaled for each school and is then compared to the score for every other school. The names of the ten schools with the highest scores are then listed on the computerized letter prepared for each student.

An IBM 360/30 computer was used to match the students' questionnaire responses to the C.A.M.P.U.S. databank. Each student's list of college selections was printed in letter form (see Appendix) on 4-part paper. The original was retained for inclusion in the Final Report to the U.S. Office of Education; the first and second carbon copies were returned to the counselors and students, respectively; the fourth copy was retained for CCI's records.

The lists of college-selections were returned directly to the counselors along with a detailed explanation of the "meaning" of the results (see Appendix). The counselors then distributed the college-selection results to the students.

The schools appearing as the student's college-selections are listed in order of the degree to which they "match" his interests and abilities. However, the student is advised to consider all ten (10) schools equally. The student's subjective considerations along with the objective determinations of the computer provide a much broader base for decision-making.

THE COUNSELORS QUESTIONNAIRE

An integral part of the study has been the determination of the counselors subjective views regarding the adequacy of the colleges selected by the computer. Naturally, the counselor is aware of specific qualitative characteristics such as emotional stability, diligence, maturity, and the like which individual students lack or possess. These considerations should definitely be included as criteria in the college selection process. However, the inability to quantify these characteristics makes it virtually impossible for the computer to satisfy this kind of determination. The computer is best at handling facts and figures which can be quantified; the advice of a concerned counselor is the natural complement when it comes to questions of a qualitative nature.

The lists of college selections were returned to the cooperating counselors along with a questionnaire to be completed by them. This questionnaire (see Appendix) was prepared as a composite list of all student participants from each high school. It included the student's name, I.D. number, and a numerical scale from 1 to 10.

Each counselor was requested to review the college-selections for his students, and to circle that digit which represented the total number of schools which the counselor considered to be appropriate selections.

Therefore, if after reviewing the list of college selections for a particular student the counselor felt that six of the ten schools selected were comparable to those he might recommend, he would circle the number "6" on the scale. In this way it was possible to interpret the counselor's satisfaction/dissatisfaction with the objective selectivity of the C.A.M.P.U.S. college-selection program.

Results of Counselor Questionnaire

Counselors representing more than 50% of all participating students responded to the Counselor's Questionnaire. Their responses were compiled and have provided the following statistics which are assumed to provide a good approximation of the opinions of all participating counselors:

Counselor perceptions of number of "satisfactory" college-selections	% of students receiving this number
at least 1	96
at least 2	94
at least 3	90
at least 4	83
at least 5	70
at least 6	62
at least 7	54
at least 8	43
at least 9	31
10	19

NOTE: less than 3.5% of all students did not receive any "satisfactory" college-selections according to the counselors opinions.

DATA ANALYSIS OF STUDENT RESPONSES

In the course of constructing the project design it became apparent that the detailed student responses provided by the participating students could be compiled and interpreted to provide an indication of student trends and preferences.

The importance of this data lies in its usefulness as a planning tool for school administrators. The ability to anticipate student trends and interests has always been a prime concern of educational planners. On a broader scale, it is of great concern in establishing a firm national indicator of potential institutional program needs.

To analyze the data efficiently, a computer program was designed to compile and interpret the student questionnaire responses.

An analytical program was written in ASSEMBLER language, and used on an IBM 360/30 computer. A total of more than 89,000 possible responses from the 829 student participants was fed into the data analysis program. The data input cards for the C.A.M.P.U.S. program were re-used for this purpose.

The results of the analysis of responses to specific questions are indicated in the following table. The underlined number indicates the response receiving the highest percent of student interest.

Data Analysis

Preference Questions	Student Choices 1st	2nd	3rd
Type of School			
A. University	61%	21%	15%
B. Liberal Arts College	19	39	19
C. Fine Arts College	3	9	13
D. Technological College	5	16	13
E. Teacher's College	7	7	17
F. Junior College	5	5	17
G. Sub-baccalaureate technical school	0	3	1
Total	100%	100%	100%
Controlling Body			
A. State or Federal Government	70%	20%	10%
B. Local Government	9	42	27
C. Private (other than religious)	15	24	40
D. Roman Catholic Church	0	3	4
E. Religious group other than RC	6	11	19
Total	100%	100%	100%
Composition of student body			
A. All women or mostly all women	4%	28%	57%
B. All men or predominately all men	3	55	41
C. Coeducational or coordinate	93	17	2
Total	100%	100%	100%
Geographical location			
A. New England	6%	19%	27%
B. Middle Atlantic States	17	28	17
C. Great Lakes States	7	19	17
D. Plains States	0	4	4
E. Southeastern States	64	12	8
F. Southwestern States	2	5	6
G. Rocky Mountain States	2	4	8
H. Far Western States	2	11	13
Total	100%	100%	100%

Preference Questions	Student Choices 1st	2nd	3rd
Enrollment			
A. Very small (under 600)	1%	4%	7%
B. Small (600-1000)	14	17	33
C. Medium (1000-25000)	42	37	19
D. Large (2500-10,000)	34	35	19
E. Very large (over 10,000)	9	7	22
Total	100%	100%	100%
Approximate annual expenses			
A. Under $1100	13%	10%	13%
B. $1100 to $1600	21	27	15
C. $1600 to $2100	26	25	34
D. $2100 to $2600	22	18	23
E. $2600 to $3100	12	16	11
F. Over $3100	6	4	4
Total	100%	100%	100%
R O T C			
A. ROTC should not be required	68	-	-
B. Army ROTC should be available	8	-	-
C. Navy ROTC should be available	11	-	-
D. Air Force ROTC should be available	13	-	-
Total	100%	-	-
Size of city or town			
A. Small town (less than 10,000)	10	-	-
B. A small city (10,000-50,000)	20	-	-
C. A medium-sized town(50,000-500,000)	54	-	-
D. A large metropolitan area (over 500,000)	8	-	-
E. A suburb of a city (core > 100,000)	8	-	-
Total	100%	-	-
Financial aid			
A. Financial aid need not be widely available for Freshmen.	12%	7%	12%
B. Financial aid should be available to Freshmen on a selective basis.	27	35	22
C. Financial aid should be available to a large number of qualified Freshmen.	40	40	15
D. Financial aid should be easily obtainable for most Freshmen.	21	18	31
Total	100%	100%	100%

A P P E N D I C E S

1. Abstract of Study

2. Guidelines for Student Selection

3. Counselor Questionnaire

4. C.A.M.P.U.S. Questionnaire

5. Sample Answer Sheet

6. List of Computerized College Selections

7. Explanation of Computer print-out

Title: The Feasibility of Computer-Assisted College Selection as a Guidance Counseling Aid

Principal Investigator: William J. Kardash

Contracting Agency: Region III, U.S. Office of Education, DHEW

Proposed Beginning and Ending Dates: October 1, 1969 - January 31, 1970

ABSTRACT

Prospective college students are faced with the dilemma of analyzing a great number of facts about many colleges for sound decision-making. This process normally involves the manual task of searching college catalogs, various college selection manuals, brochures, and so on. It is virtually impossible to search through these documents and make an accurate analysis and decision based on their contents. Consequently, the student is left with only a "best estimate" basis for college selection.

This study will analyze and determine the feasibility of a computerized college selection service for high school students. It is anticipated that computer-assisted college selection will free guidance counselors and students from the clerical drudgery associated with college selection, thereby permitting them to analyze, in greater detail, those schools for which they are best suited.

One thousand high school seniors will be randomly selected from among the public school systems in Region III. They will complete a questionnaire detailing their qualifications for college admission and preferences for college characteristics. This information will be matched to a computerized college databank; the computer will identify ten schools which most closely approximate the student's interests and abilities. In addition, each cooperating counselor will complete a questionnaire inquiring into the counselor's "level of satisfaction" with each student's college selections as determined by the computer. This will permit a comparison of the counselor's subjective opinions with the objective selectivity employed by the computer.

This Study will also develop comparative statistics about the preferences and trends of the sample. This information will be disseminated to selected groups of school administrators to assist in long-range planning.

COMPUTERIZED COLLEGE SELECTION
Guidelines

In selecting the students for participation in the study concerning computerized college selection, please use the following as guidelines:

1. Participating students should be in the Junior Year.

2. The students should indicate an active interest in attending a two or four year degree granting institution immediately following graduation.

3. The participating group should be equally divided among male and female students.

4. The group should be selected at random. This is important to ensure accurate results.

5. Students should indicate at least one of the following on the Questionnaire: (a) PSAT scores (verbal and math); (b) SAT scores (verbal and math); (c) ACT scores (composite); (d) rank in class.

6. Students should return their completed questionnaires to their counselor who will forward the Answer Sheets in the postage-paid envelope provided. All Answer Sheets should be forwarded at the same time.

7. Completed questionnaires must be received at our office no later than _____; processed results will be returned to each cooperating counselor during the first week in March.

8. If you have any questions regarding the completion of the questionnaires, submission dates, etc. PLEASE CALL COLLECT

Creative Concepts, Inc.
5400 Pooks Hill Road
Washington, D.C. 20014
(301) 530-6100

C.A.M.P.U.S. ANSWER SHEET

See Questionnaire for Instructions

Last name — First — Middle

Street address

City — State — Zip

High School attended — City — State — Year of graduation

6–15: 1 2 3 4 5 6 7 8 9 10

16–22: A B C D E F G — 11

23–27: A B C D E — 12

28–30: A B C — 13

31–38: A B C D E F G H — 14

39–43: A B C D E — 15

44–49: A B C D E F — 16

50–53: A B C D — 17

54–58: A B C D E — 18

59–60: A B — 19

61–64: A B C D — 20

65–67: A B C — 21

80: 1

6–9: A B C D — 22

10–11: A B — 23

12–13: A B — 24

14–21: A B C D E F G H — 25

22–37: I J K L M N O P Q R S T U V W X — 25

38–52: 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 — 25

80: 2

(Be Sure Your Answers Are Legible)

[illegible] Sheet and en- [illegible] it to C.A.M.P.U.S.

C.A.M.P.U.S. Questionnaire

INSTRUCTIONS

This Questionnaire is divided into two parts. Part I concerns your personal qualifications for college entrance; Part II relates to your preferences for particular college characteristics.

To answer the questions, follow these instructions:

1. Read each question carefully. If you do not understand a question, seek the assistance of your parents, teachers, or guidance counselor.

2. All of your responses to both sections of the Questionnaire must be entered into the appropriate boxes on the C.A.M.P.U.S. Answer Sheet. The number of each question is shown below the correct box on the Answer Sheet. We suggest that you indicate your responses on the Questionnaire, and then transfer all of your responses to the Answer Sheet at one time. This will allow you to review your responses and to make changes if necessary. You may keep the Questionnaire as a record of your responses.

3. Since the questions in Part II require a different type of response (you are permitted to rank your responses in order of preference), please read the instructions at the beginning of Part II very carefully.

PART I: QUALIFICATIONS (Questions 1-10)

This section deals with your qualifications for college admission. Each question has from two to ten possible responses. Read the question, and select the response which most closely fits your background; then enter the number corresponding to that response in the appropriate box on the Answer Sheet. ALL QUESTIONS MUST BE ANSWERED.

1. I am:
   1. Male
   2. Female

2. Prior to entering college I shall have completed ____ academic units (an academic unit is the equivalent of two semesters of study for which credit is received):
   1. Less than 12
   2. 12 to 14
   3. 15 or more

3. Prior to entering college I shall have completed ____ years of English:
   1. Less than 3
   2. 3
   3. 4 or more

4. Prior to entering college I shall have completed ____ years of a Foreign Language:
   1. Less than 2
   2. Two or more

5. [illegible] year(s) of Mathematics:

1. Less than 2
2. Two or more

6. Prior to entering college I shall have completed _____ year(s) of Laboratory Science:

1. Less than 1
2. One or more

7. My score on the Verbal Section of the Scholastic Aptitude Test (SAT) was: (If you have taken the SAT examination more than once, please indicate your highest score. If you have not taken the SAT exam, but have taken the PSAT, you may indicate your equivalent PSAT score. This equivalent is found by adding a zero to your actual PSAT score.)

0. I did not take the Verbal Section of the SAT or PSAT
1. 400 or below
2. 401 to 450
3. 451 to 500
4. 501 to 550
5. 551 to 600
6. 601 to 650
7. 651 to 700
8. 701 to 750
9. Above 750

8. My score on the Mathematics Section of the SAT was: (refer to instructions in question 7)

0. I did not take the Mathematics Section of the SAT or PSAT
1. 400 or below
2. 401 to 450
3. 451 to 500
4. 501 to 550
5. 551 to 600
6. 601 to 650
7. 651 to 700
8. 701 to 750
9. Above 750

9. My Composite Score on the American College Testing Program (ACT) Exam was:

0. I did not take the ACT Exam
1. 11 or below
2. 12 to 15
3. 16 to 20
4. 21 to 25
5. 26 or more

10. My rank in class is:

0. I do not know my rank in class
1. Top 1/10 of high school class
2. Top 1/5 of high school class
3. Top 1/3 of high school class
4. Top 2/3 of high school class
5. Lower 1/3 of high school class

PART II. PREFERENCES (Questions 11-26)

The questions in this section deal with the characteristics which you would prefer in a college. We have listed fifteen factors which most students feel are important in selecting a college. We realize that these factors may differ in importance in your decision; YOU WILL HAVE AN OPPORTUNITY TO INDICATE THE RELATIVE IMPORTANCE OF EACH CHARACTERISTIC IN YOUR DECISION WHEN YOU ANSWER QUESTION 26.

Each of the Preference Questions has a number of possible alternatives. Read each alternative for that question very carefully, and then decide which of these possibilities you would most like and place the number "1" in the box corresponding to that choice. Your second choice should have a "2" in the box for that alternative, your third choice a "3," and so on. If you DO NOT want a particular alternative considered, or if that alternative is completely unacceptable in your selection, leave the box which corresponds to that alternative blank. ANY ALTERNATIVE WHICH YOU WOULD DESIRE IN A COLLEGE MUST HAVE SOME NUMBER IN THE CORRESPONDING BOX.

EXAMPLE

15. Enrollment:

_A_ A. Very small (under 600)
3 B. Small (600 to 1000)
2 C. Medium (1000 to 2500)
1 D. Large (2500 to 10,000)
4 E. Very large (over 10,000)

	3	2	1	4
A	B	C	D	E
		15		

The response shown in the example indicates that the student would prefer a large sized school first, a medium sized school second, and so on; he would not like to enroll in a very small school.

My preferences are:

11. Type of school:

__A. University
__B. Liberal Arts College
__C. Fine Arts College
__D. Technological College
__E. Teacher's College: Liberal Arts & Teacher Education
__F. Junior College
__G. Sub-baccalaureate technical school

12. Controlling body:

__A. State or Federal Government
__B. Local Government
__C. Private (other than religious affiliated)
__D. Roman Catholic Church
__E. Religious group other than Roman Catholic Church

13. Composition of the student body:

__A. All women or predominately all women
__B. All men or predominately all men
__C. Coeducational or coordinate

14. Geographical location:

__A. New England (Conn., Mass., Me., N.H., R.I., Vt.)
__B. Middle Atlantic States (D.C., Dela., Md., N.J., N.Y., Pa.)
__C. Great Lakes States (Ill., Ind., Mich., Ohio, Wisc.)
__D. Plains States (Iowa, Kans., Minn., Mo., Neb., N.D., S.D.)
__E. Southeastern States (Ala., Ark., Fla., Ga., Ky., La., Miss., N.C., S.C., Tenn., Va., W. Va., Canal Zone, Puerto Rico, Virgin Is.)
__F. Southwestern States (Ariz., N. Mex., Okla., Texas)
__G. Rocky Mountain States (Colo., Idaho, Mont., Utah, Wyo.)
__H. Far Western States (Alaska, Calif., Hawaii, Nev., Ore., Wash., Guam)

30

16. Enrollment:

__A. Very small (under 600)
__B. Small (600 to 1000)
__C. Medium (1000 to 2500)
__D. Large (2500 to 10,000)
__E. Very large (over 10,000)

17. Approximate annual expenses (tuition, fees, room and board):

__A. Under $1100.
__B. $1100. to $1600.
__C. $1600. to $2100.
__D. $2100. to $2600.
__E. $2600. to $3100.
__F. Over $3100.

17. Reserve Officer Training Corps (ROTC) Program:

__A. ROTC should not be required.
__B. Army ROTC should be available.
__C. Navy ROTC should be available.
__D. Air Force ROTC should be available.

18. Size of city or town:

__A. A small town (less than 10,000)
__B. A small city (10,000 to 50,000)
__C. A medium-sized city (50,000 to 500,000)
__D. A large metropolitan area (over 500,000)
__E. A suburb of a city (inner-city population exceeds 100,000)

19. Residential mix:

__A. The majority of students should reside on campus or in nearby housing facilities.
__B. The majority of students should commute from home daily.

20. Characteristics of the student body:

__A. They should be inclined toward academic pursuits with informal participation in social activities.
__B. They should have a strong inclination toward organized extracurricular activities while maintaining participation in the academic areas.
__C. They should be interested in inter-personal relationships with a deep concern for social responsibility.
__D. They should be competitive within the "system" and exhibit a great deal of school spirit.

21. Academic emphasis of the institution:

__A. It should emphasize liberal arts study.
__B. It should emphasize technical and/or scientific study.
__C. It should emphasize occupational training in a specific field (e.g., laboratory technology).

22. Financial aid:

__A. Financial aid need not be widely available for Freshmen.
__B. Financial aid should be available to Freshmen on a selective basis.
__C. Financial aid should be available to a large number of qualified Freshmen.
__D. Financial aid should be easily obtainable for most Freshmen.

23. Fraternities or sororities:

__A. They should play a major role in collegiate social life, and a large number of students should participate.
__B. They should play a minor role in collegiate social life, and a small number of students should participate.

24. Formal overseas study program:

__A. An overseas study program should be available.
__B. An overseas study program need not be available.

25. I would like the institution to offer courses and degrees in one or more (up to five) of the following subject areas (DO NOT PICK MORE THAN FIVE):

__A. Agriculture
__B. Architecture
__C. Biological Sciences
__D. Business and Commerce
__E. Economics
__F. Education
__G. Engineering
__H. English Literature
__I. Fine and Applied Arts
__J. Foreign Languages
__K. General Studies (Liberal Arts)
__L. Health Professions (Medical Technology, Pharmacy, etc.)
__M. History
__N. Home Economics
__O. Mathematics
__P. Nursing
__Q. Philosophy
__R. Political Science
__S. Physical Sciences (Chemistry, Physics, Geology, etc.)
__T. Psychology
__U. Religion
__V. Secretarial Studies
__W. Sociology
__X. Social Sciences (*except* Economics, Political Science, and Sociology)

26. WEIGHTING OF PREFERENCE QUESTIONS:

The questions which you have just answered will vary in importance to you. This question allows you to indicate the relative importance which YOU would give to each college characteristic mentioned in questions 11-25. Each characteristic will fall somewhere between "totally unimportant" (weight equal to zero) and "extremely important" (weight equal to nine). The possible gradations between these extremes are shown on the following line:

Totally Unimportant	0	1	2	3	4	5	6	7	8	9	Extremely Important

EXAMPLE

14. Geographic Location 14) 2

A weight of two means that geographic location is a factor in the student's choice of a school, but not a very important one.

For each Preference Characteristic, select a number (zero through 9) which reflects the importance of each characteristic to you. This value should be entered in the appropriate box. Any value may be used as frequently as you wish.

Preference Characteristic		Weighting Value
11)	Type of School	11) _____
12)	Controlling Body	12) _____
13)	Composition of Student Body	13) _____
14)	Geographic location	14) _____
15)	Enrollment	15) _____
16)	Cost	16) _____
17)	ROTC	17) _____
18)	Size of City or Town	18) _____
19)	Residential mix	19) _____
20)	Characteristics of Students	20) _____
21)	Academic emphasis	21) _____
22)	Financial aid	22) _____
23)	Fraternities and sororities	23) _____
24)	Overseas study program	24) _____
25)	Courses and degrees offered	25) _____

Now that you have completed the Questionnaire and transferred your responses to the Answer Sheet, please review your responses to make sure they are correct, complete, and legible.

The sooner you submit your Questionnaire, the more promptly C.A.M.P.U.S. will be able to provide you with the list of schools you and C.A.M.P.U.S. have selected.

College Selection Summary Questionnaire

Directions

Counselor:

The names of all students in your school who participated in the U.S. Office of Education study dealing with computer-assisted college selection are listed on the attached pages. The students are listed by "student number", as well as by name. In addition, a scale is included which you are requested to complete. The scale represents the number of schools appearing on the individual lists which YOU feel are satisfactory selections.

Please refer to the appropriate lists of college selections for each student (previously mailed to you) and CIRCLE that digit which represents the NUMBER OF SCHOOLS which, in your opinion, are satisfactory selections. Thus, if "John Doe's" list of college selections contains seven (7) colleges which are in line with those you might recommend, circle "7" on the scale.

All of your responses will be kept in strictest confidence, and only compiled statistics will be disseminated.

This is a most important phase of the overall study, and your cooperation is greatly appreciated. Please return the College Selection Summary Sheet on or before May 22, 1970; the final report results will be distributed in mid June.

Thank You,

William J. Kardash

William J. Kardash
Project Director

William J. Kardash
Creative Concepts, Inc.
5400 Pooks Hill Road
Bethesda, Maryland 20014

COLLEGE SELECTION SUMMARY SHEET

Counselor ____________________

School ____________________

City __________ State __________

Student Name	Student Number	Rating
		1 2 3 4 5 6 7 8 9 10
		1 2 3 4 5 6 7 8 9 10
		1 2 3 4 5 6 7 8 9 10
		1 2 3 4 5 6 7 8 9 10
		1 2 3 4 5 6 7 8 9 10
		1 2 3 4 5 6 7 8 9 10
		1 2 3 4 5 6 7 8 9 10
		1 2 3 4 5 6 7 8 9 10
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		1 2 3 4 5 7 8 9 10
		1 2 3 4 5 6 7 8 9 10

C.A.M.P.U.S. ANSWER SHEET

(Please print or type)

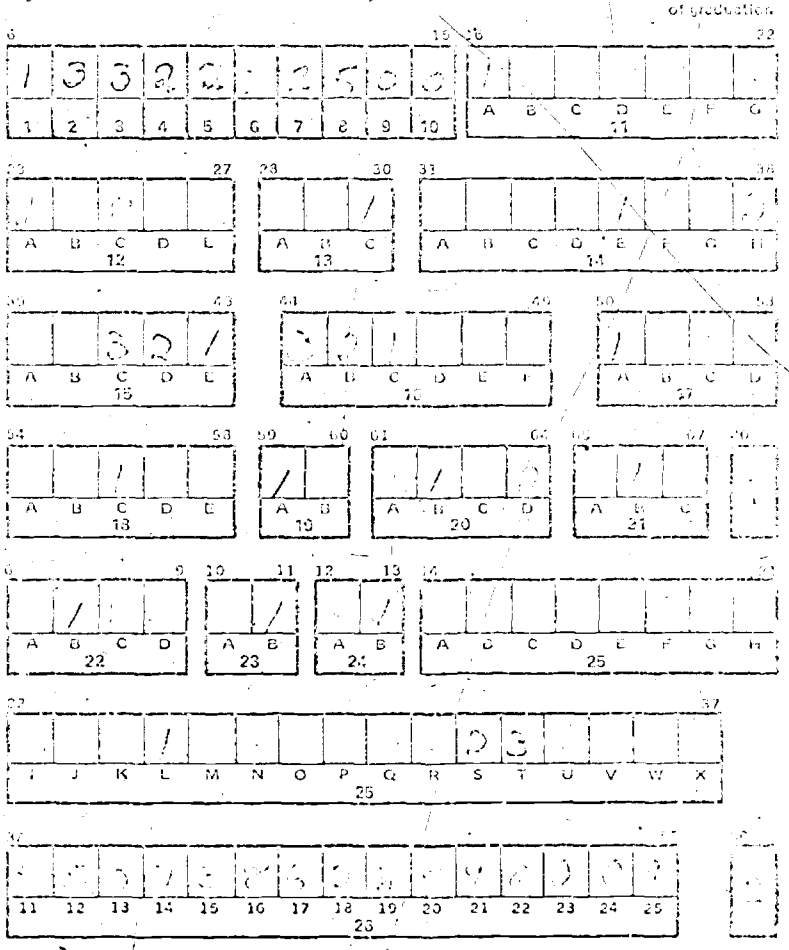
See Questionnaire for Instructions

Last name First Middle

Street address

City State Zip

High School attended City State Year of graduation



(Be Sure Your Answers Are Legible)

5400 [illegible] HILL ROAD
WASHINGTON, D.C. 20014
MAY. 9, 1970

DEAR RICHARD BAXTER

THE COMPUTER PROCESSING OF YOUR C.A.M.P.U.S. QUESTIONNAIRE HAS BEEN COMPLETED AND THE RESULTS ARE LISTED BELOW -

COLLEGE NAME	CITY AND STATE	ZIP CODE
UNIV OF NC AT CHAPEL HILL	CHAPEL HILL N C	27514
UNIVERSITY OF ALABAMA	UNIVERSITY ALA	35486
FLORIDA STATE UNIVERSITY	TALLAHASSE FLA	32306
OREGON STATE UNIVERSITY	CORVALLIS OREG	97601
UNIV OF SOUTH CAROLINA	COLUMBIA SC	29208
CLEMSON UNIVERSITY	CLEMSON SC	29631
UNIVERSITY OF ARKANSAS	FAYETTEVILLE ARK	72701
AUBURN UNIVERSITY	AUBURN ALA	36830
NC STATE UNIV-RALEIGH	RALEIGH N C	27607
UNIVERSITY OF OREGON	EUGENE OREG	97403

THESE SCHOOLS HAVE BEEN SELECTED FOR YOU SOLELY ON THE BASIS OF THE CRITERIA YOU ESTABLISHED IN RESPONSE TO THE C.A.M.P.U.S. QUESTIONNAIRE. IT IS IMPORTANT TO NOTE THAT ONLY SCHOOLS WHICH MET THESE CRITERIA WERE CHOSEN FOR YOU.

THIS C.A.M.P.U.S. SELECTION IS MEANT TO BE THE FIRST STEP IN YOUR CHOICE OF A COLLEGE. ONLY YOU, YOUR PARENTS, AND YOUR GUIDANCE COUNSELOR CAN MAKE THE FINAL DECISION ABOUT WHICH SCHOOLS ARE BEST FOR YOU. BEFORE YOU MAKE THIS DECISION, WE SUGGEST THAT YOU CAREFULLY EXAMINE ALL OF THE SCHOOLS SELECTED BY C.A.M.P.U.S. ONCE YOU HAVE STUDIED AND DISCUSSED EACH SCHOOL IN DETAIL, YOU WILL BE BETTER PREPARED TO MAKE THE BEST CHOICE FOR YOU.

WE HAVE ENCLOSED A C.A.M.P.U.S. QUESTIONNAIRE AND ASK THAT YOU GIVE IT TO A FRIEND WHO MIGHT BE INTERESTED IN OUR SERVICE. IF YOU HAVE ANY QUESTIONS OR COMMENTS ABOUT C.A.M.P.U.S., PLEASE DO NOT HESITATE TO WRITE TO US.

SINCERELY,

17-01

CREATIVE CONCEPTS

Dear Counselor:

The results of the C.A.M.P.U.S. college-selection questionnaires have been completed, and are enclosed in the accompanying folder. One set of college selections is for distribution to the participating students, while the other set is for your files.

There are several important facts concerning the selections which should be explained:

1. The colleges are selected on the basis of the responses which each student provided on the C.A.M.P.U.S. questionnaire. Consequently, the accuracy and/or completeness which the individual exercised in completing the questionnaire is very important in determining the final results.

2. Those students who did not indicate the PSAT, SAT, ACT, or rank in class have received selections based almost entirely on their preferences; the number of years of math, english, etc. provided some degree of qualification for the various schools.

3. The schools are selected, basically, by a process of elimination. A score is computed for each school for which the student is qualified, followed by the elimination of all schools which do not meet his preferences. The TOP TEN scores (hence, schools) are selected and printed out by the computer: THE SCHOOLS APPEAR IN ORDER OF THEIR DEGREE OF MATCH. However, we have purposely omitted the scores and a numerical ranking of the schools because we prefer for the student to consider ALL TEN schools as equals. No one should be in the position of telling the student that this is THE school for you: least of all, a computer!

   We suggest that the student NOT be told the reason behind the order of schools appearing on the list.

4. In some instances the student's list may contain LESS THAN ten schools; this can occur for several reasons:
   a. an incomplete questionnaire;
   b. too severe restrictions: i.e., he may wish to attend a technological college supported by the Catholic Church, and located in the Rocky Mountains. Similar combinations of criteria with no alternatives provided will cause the computer to print-out an

error message indicating the conditions resulting in the limitation of selections.

c. if several, but less than ten schools are selected, it is the result of the exhaustion of those schools meeting the student's criteria existing in the Data-bank.

5. A most important phase of this project is to follow: during the next two weeks you will receive a brief questionnaire inquiring into YOUR subjective opinions about the computerized college selections. We would like to know if the schools selected for the students are, in fact, in line with those you would recommend for the student. You will need the list of colleges reserved for your files, so please keep them on hand.

Thus far, the project has been fairly close to schedule, save for a few minor hazards such as mail strikes, and the like.

Thank you for your assistance and cooperation through PHASE ONE of the Study; it has been most appreciated.

Sincerely,

William J. Kordash
Project Director

Attachment

WJK/s